

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application:

Listing of Claims:

1. Claims 1-11 (canceled)
12. (withdrawn) The method according to claim 9 wherein the amino acid sequence is SEQ ID NO:10.
13. (withdrawn) The method according to claim 9 wherein the amino acid sequence is a variant, mutant or fragment of SEQ ID NO:10 having the same function of SEQ ID NO:10.
14. (withdrawn) The method according to claim 9 wherein the amino acid sequence is SEQ ID NO:12.
15. (withdrawn) The method according to claim 9 wherein the amino acid sequence is a variant, mutant or fragment of SEQ ID NO:12 having the same function of SEQ ID NO:12.
16. Claims 16-18 (canceled)
19. (withdrawn) A method for determining an expression level of a DHAM-kinase comprising: (a) determining the level of the DHAM-kinase expressed in a hyperactivated macrophage; (b) determining the level of the DHAM-kinase expressed in a non-hyperactivated macrophage; and (c) comparing the level of the DHAM-kinase expressed in step (a) to the level of the DHAM-kinase expressed in step (b), wherein a difference in levels indicates a differentially expressed DHAM-kinase.
20. (withdrawn) The method according to claim 19 wherein the hyperactivated macrophage is a mammalian macrophage and the non-hyperactivated macrophage is a mammalian macrophage.

21. (withdrawn) The method according to claim 20 wherein the hyperactivated macrophage is a human macrophage and the non-hyperactivated macrophage is a human macrophage.
22. (withdrawn) The method according to claim 19 wherein the difference in expression level is determined at the DHAM-kinase nucleic acid level.
23. (withdrawn) The method according to claim 19 wherein the difference in expression level is determined at the DHAM-kinase protein level.
24. (withdrawn) The method according to claim 23 wherein the DHAM-kinase protein consists of an amino acid sequence selected from the group consisting of: SEQ ID NO:4, SEQ ID NO:10, and SEQ ID NO:12.
25. (withdrawn) The method according to claim 24 wherein the amino acid sequence is SEQ ID NO:4.
26. (withdrawn) The method according to claim 24 wherein the amino acid sequence is a variant, mutant or fragment of SEQ ID NO:4 having the same function of SEQ ID NO:4.
27. (withdrawn) The method according to claim 24 wherein the amino acid sequence is SEQ ID NO:10.
28. (withdrawn) The method according to claim 24 wherein the amino acid sequence is a variant, mutant or fragment of SEQ ID NO:10 having the same function of SEQ ID NO:10.
29. (withdrawn) The method according to claim 24 wherein the amino acid sequence is SEQ ID NO:12.

30. (withdrawn) The method according to claim 24 wherein the amino acid sequence is a variant, mutant or fragment of SEQ ID NO:12 having the same function of SEQ ID NO:12.
31. (withdrawn) A method for diagnosing or monitoring a chronic inflammatory airway disease comprising: (a) determining the level of a DHAM-kinase expressed in a hyperactivated macrophage; (b) determining the level of the DHAM-kinase expressed in a non-hyperactivated macrophage; and (c) comparing the level of the DHAM-kinase expressed in step (a) to the level of the DHAM-kinase expressed in step (b), wherein a difference in levels indicates a differentially expressed DHAM-kinase.
32. (withdrawn) The method according to claim 31 wherein the difference in expression level is determined at the DHAM-kinase nucleic acid level.
33. (withdrawn) The method according to claim 31 wherein the difference in expression level is determined at the DHAM-kinase protein level.
34. (withdrawn) The method according to claim 31 wherein the chronic inflammatory airway disease is selected from the group consisting of: chronic bronchitis and COPD.
35. (withdrawn) The method according to claim 31 wherein the method is performed using a macrophage or a part thereof obtainable from a site of inflammation.
36. (withdrawn) A substance determined to be an activator or an inhibitor of a DHAM-kinase.
37. (withdrawn) A substance determined to be an activator or an inhibitor of a DHAM-kinase according to the method of claim 1.
38. (withdrawn) A substance for the treatment of a disease wherein the substance is an activator or an inhibitor of a DHAM-kinase.

39. (withdrawn) The substance according to claim 38 wherein the disease is a chronic inflammatory airway disease.
40. (withdrawn) The substance according to claim 39 wherein the chronic inflammatory airway disease is selected from the group consisting of: chronic bronchitis and COPD.
41. (withdrawn) A pharmaceutical composition comprising at least one substance which is an activator or an inhibitor of a DHAM-kinase; and a pharmaceutical carrier.
42. (withdrawn) A pharmaceutical composition comprising at least one substance which is determined to be an activator or an inhibitor of a DHAM-kinase according to the method of claim 1; and a pharmaceutical carrier.
43. (withdrawn) A pharmaceutical composition comprising at least one substance which is determined to be an activator or an inhibitor of a DHAM-kinase according to the method of claim 9; and a pharmaceutical carrier.
44. (withdrawn) A method for treating a chronic inflammatory airway disease comprising: administering to a subject in need of such treatment an effective amount of a pharmaceutical composition comprising at least one substance determined to be an activator or an inhibitor of a DHAM-kinase.
45. (withdrawn) The method according to claim 44 wherein the subject is a mammal.
46. (withdrawn) The method according to claim 44 wherein the subject is a human being.
47. (withdrawn) The method according to claim 44 for treating a chronic inflammatory airway disease selected from the group consisting of: chronic bronchitis and COPD.

48. (withdrawn) A method for treating a chronic inflammatory airway disease comprising: administering to a subject in need of such treatment an effective amount of a pharmaceutical composition comprising at least one substance determined to be an activator or an inhibitor of a DHAM-kinase according to the method of claim 1.
49. (withdrawn) A method for treating a chronic inflammatory airway disease comprising: administering to a subject in need of such treatment an effective amount of a pharmaceutical composition comprising at least one substance determined to be an activator or an inhibitor of a DHAM-kinase according to the method of claim 9.
50. (withdrawn) A method for selectively modulating a DHAM-kinase in a macrophage, comprising administering a substance determined to be an activator or an inhibitor of a DHAM-kinase.
51. (withdrawn) The method according to claim 50 wherein the macrophage is involved in a chronic inflammatory airway disease.
52. (withdrawn) The method according to claim 50 wherein the chronic inflammatory airway disease is selected from the group consisting of: chronic bronchitis and COPD.
53. (withdrawn) A method for selectively modulating a DHAM-kinase in a macrophage, comprising administering a substance determined to be an activator or an inhibitor of a DHAM-kinase according to the method of claim 1.
54. (withdrawn) A method for selectively modulating a DHAM-kinase in a macrophage, comprising administering a substance determined to be an activator or an inhibitor of a DHAM-kinase according to the method of claim 9.
55. (new) A method for determining whether a substance inhibits or reduces a chronic inflammatory airway disease in which a macrophage is in a hyperactivated status due to down-regulated p21-activated kinase 2 (PAK2) kinase comprising:

(a) contacting a PAK2 kinase having an amino acid sequence as depicted in SEQ ID NO:4 or an equivalent, variant, mutant or fragment of the PAK2 kinase having substrate phosphorylation or substrate recognition or substrate binding capability thereof in the presence of a substrate of the PAK2 kinase with the substance to be tested, and

(b) measuring whether substrate phosphorylation or substrate recognition or substrate binding is modulated,

wherein a substance which activates said substrate phosphorylation or substrate recognition or substrate binding is a substance which can be used to inhibit or to reduce a chronic inflammatory airway disease in which a macrophage is in a hyperactivated status due to down-regulated PAK2 kinase.

56. (new) The method according to claim 55 wherein the method is carried out in a cell-free system.

57. (new) The method according to claim 55 wherein step (b) is coupled to cellular effects caused by PAK2 kinase.

58. (new) The method according to claim 55 wherein the inflammatory airway disease is chronic obstructive pulmonary disease (COPD).

59. (new) The method according to claim 55 wherein the inflammatory airway disease is chronic bronchitis.